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Operational Fires and Unity of Command

A Monograph
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ABSTRACT

OPERATIONAL FIRES AND UNITY OF COMMAND by MAJ Charles O. Hammond, USA, 41 pages.

The purpose of this monograph is to provide a definition of operational fires, illustrate the concept with historical examples, and highlight doctrinal implications for the command and control of these fires. Operational fires are distinctly different from fire support at the tactical level. Though they can accomplish similar functions, operational fires differ from their tactical counterparts primarily in the effe_ts desired and method of planning.

The carpet bombing that preceded the allied breakout from Normandy during Operation COBRA, Operation STRANGLE in Korea, and Operation LINEBACKER in Vietnam are historical examples of operational fires. Fundamental tasks performed by such fires are to facilitate operational maneuver, isolate the battlefield, and destroy operational facilities. Air power has been the traditional means of delivering operational fires.

Though these three operations were successful, problems were encountered. The lack of an effective command and control mechanism resulted in fratricide in Normandy and difficulty in coordinating air assets in both Korea and Vietnam. Joint doctrine that is now being written may alleviate some of these problems. Establishing unity of command will assist in maximizing the use of scarce resources and enhance the utility of operational fires in future campaigns.

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I. INTRODUCTION

> Tactical organizations and principles adequate for the conduct of engagements and battles are not adequate for the design and conduct of the far-flung major operations and campaigns which today give context and meaning to the actual clash of military forces on the battlefield.
>
> FM 100-6, Large Unit Operations[1]

These words appearing in the introduction of FM 100-6, Large Unit Operations, bring to light an important point concerning the U.S. Army's current emphasis on operational art. The differentiation between the tactical, operational, and strategic levels of war is more than semantic. Where the terms "strategy" and "tactics" may have been sufficient to describe warfare in the past, the increasing scope and complexity of modern warfare gives rise to an intermediate level that bridges the gap between strategy and tactics. Operational art links the attainment of strategic goals to the conduct of combat operations. The U.S. Army can be justifiably proud in the development of its tactical doctrine. Voids do exist, however, at the operational level. A common understanding of the combat functions performed at the operational level is lacking. Fires are the case in point.

Operational art is more than the execution of tactics on a grand scale. It is the control of sequential and simultaneous operations across a theater that gives direction to the employment of tactical forces. Without this direction, the application of force and the expenditure

of resources would be wasted on disconnected engagements with no focus on the attainment of strategic objectives.[2]

Combat functions performed at the operational level are analogous to those associated with tactical operations. The greater scale of operations, however, changes the way these functions are conducted and synchronized. Major operational functions include intelligence, maneuver, fires, sustainment, and deception.[3] This paper specifically addresses fires. Understanding how operational fires differ from fire support at the tactical level will enable the operational commander to influence the operation to achieve his desired outcome. Operational fires are not fire support as seen in tactical units.

My purpose is to describe this difference in order to provide an understanding of operational fires. Historical examples will illustrate the concept. An analysis of the case studies presented will lead to a proposed method of control for the future employment of operational fires. I will attempt to answer the following question: Can a change in doctrine provide for more effective control of operational fires?

The fundamentals of organizing artillery for combat - adequate support for committed elements, weight to the main effort, immediately available fire support to the force commander, facilitate future operations, and maximum feasible centralized control - result in the assignment of tactical missions to artillery units. Fires at the

operational level, however, involve more than field artillery assets. These fundamentals fall short of the mark as the criteria for evaluating operational fires.

Operational fires are self contained operations designed to achieve a single objective. They are planned at an operational headquarters and are critical to the accomplishment of the overall objective. Operational fires are most effective when synchronized with other operational functions and conducted as a joint effort. These factors go beyond tactical considerations and will be used as the criteria for judging operational fires.

I will focus strictly on conventional fires. While no single echelon of command is solely responsible for the execution of operational art, the Army corps represents the highest level where tactical action takes place.[4] My discussion of operational fires will therefore be in support of operations above the corps level.

II. OPERATIONAL FIRES IN THEORY

"Fires are considered operational when their application constitutes a decisive impact on the conduct of a campaign or major operation."[5] This definition of operational fires from FM 100-5 is not complete. While it cannot be denied that operational fires have an impact and form an integral part of any campaign, a more accurate definition keys on their purpose and method of planning. Operational fires are those that do not directly support

forces in contact yet determine favorable conditions for future engagements and are planned from the top down.

Fires play a decisive role at the tactical level and are a key component of combat power (along with maneuver, protection, and leadership). Tactical fires primarily support maneuver forces in contact by suppressing or destroying enemy direct fire, indirect fire, and air defense systems. Tactical fires enhance mobility and countermobility by screening friendly movement with smoke, delivering scatterable mines, and illuminating the battlefield. Suppression of enemy air defense facilitates the joint air attack of deep targets with Army and Air Force aviation assets. Regardless of delivery system - cannon, rocket, missile, naval gunfire, attack helicopter, Air Force aircraft - tactical fires support the close battle, are planned at the lowest level, passed up for resolution, and tied directly to the supported commander's scheme of maneuver. This is the domain of fire support.

Operational fires are distinctly different. They are analogous in that they still disrupt movement, command and control, and sustainment of enemy forces, but key differences must be pointed out.

In an important sense, operational fires are not fire support at all, but rather a coequal component of the operational scheme.♠

Operational fires are primarily furnished by assets not dedicated to the direct support of units in contact. Range

limitations of current cannon artillery systems normally preclude their use as a true operational asset. Operational fires could be delivered by Multiple Launch Rocket Systems (MLRS), Army Tactical Missile Systems (ATACMS), and Lance.

Distance from the FLOT is not the sole determinant for an operational target. If the potential destruction of a target could be so decisive as to completely alter an opponent's course of action and that target can be ranged by cannon units, then such a strike could be viewed as operational. This would be true for the attack of a key command and control or logistics facility that denies future enemy freedom of action.

Operational fires are mainly provided by theater air forces in the form of air interdiction and battlefield air interdiction missions.[7] The interdiction effort planned and executed by the Air Component Commander has historically been the prime example of operational fires. Ground/sea launched cruise missiles, naval gunfire, and SOF direct action are also considered operational fires.

Operational fires differ from tactical fires in their method of planning. They are planned from the top down. Fires to support the theater commander's concept of operation are planned by the ground, sea, and air component commanders then passed to subordinate units for execution. Key facilities, road and rail networks, and bridges are ideal targets for operational fires because their

destruction denies the opponent's future freedom of movement.

The key difference between tactical and operational fires is in their effect. Operational fires since World War II have focused on the accomplishment of one or more of the following tasks:[8]

1) Facilitate maneuver to operational depths by creating exploitable gaps in the enemy's tactical defense.

2) Isolate the battlefield by interdicting enemy forces and logistical support.

3) Destroy key operational facilities.

AirLand Battle doctrine recognizes these critical tasks for firepower. The interdiction effort in NATO wich emphasis on the Follow On Forces Attack (FOFA) highlights the importance of operational fires. FM 100-5 states:

> At the operational level, deep operations include efforts to isolate current battles and to influence where, when, and against whom future battles will be fought.[9]

This is the essence of operational art - setting the stage for future battles. Deep attack from ALB doctrine and FOFA in a NATO scenario are based on operational fires.

A review of history will bring operational fires into focus. World War II, Korea, and Vietnam provide examples of U.S. efforts to isolate the battlefield, destroy enemy command and control facilities, and disrupt the flow of enemy men and materiel to the front. The carpet bombing that preceded the Allied breakout from Normandy, Operation

STRANGLE in Korea, and Operation LINEBACKER in Vietnam are classic examples of fires that illustrate the operational effect.

III. OPERATIONAL FIRES IN PRACTICE

The Normandy Breakout - World War II

Concerned with the limited advance since coming ashore in June, Lieutenant General Omar N. Bradley looked anxiously for his First Army to break out of the bocage. In light of Montgomery's failed attempt to break out at Caen on 7 July, Bradley was all the more determined not to let a stalemate develop. He viewed Brittany's ports as essential to the buildup of combat power for the Allied push across Europe. To conduct First Army's breakout, Operation COBRA was developed. This plan called for Major General J. Lawton Collins' VII (U.S.) Corps to penetrate German defenses on a narrow front west of St Lo. As Collins' divisions attacked rapidly to the southwest, Bradley's intent was to secure the approaches into Brittany and trap the German LXXXIV Corps between the VII Corps and Major General Troy H. Middleton's VIII (U.S.) Corps. The key to opening the door for Operation COBRA was air power.[19]

Gen Bradley envisioned an aerial bombardment of an unprecedented scale. He planned to carpet bomb an area south of the St Lo - Perriers road using fighter bombers and medium bombers from the Ninth Air Force and heavy bombers from the Eighth Air Force. In Bradley's words "I've been

wanting to do this now since we landed. When we pull it, I want it to be the biggest thing in the world. We want to smash right through."[11]

Following the air bombardment, infantry divisions were to penetrate the remnants of German defenses to seize the towns of Marigny and St Gilles. Armored divisions would pass through this three mile wide gap in a drive towards the Cotentin coast town of Coutances in an effort to encircle German forces opposite VIII Corps.

Carpet bombing had preceded Montgomery's failed attempt at Caen. Bradley hoped to improve on that performance. The St Lo - Perriers road was chosen as the line of departure because it could be clearly identified from the air. Highly accurate fighter bombers were to strike an area 250 yards wide and 7000 yards long just south of this road with light fragmentation bombs. Heavy bombers would hit an area one mile wide beyond this zone. Medium bombers were to follow and concentrate on enemy strongpoints that could not be ranged by artillery. By using lighter fragmentation bombs it was hoped to get the desired destruction of enemy forces without tearing up the terrain that would make it impassable for Allied armor. By using more accurate fighter bombers in the zone closest to the friendly troops, attacking formations on the ground could advance immediately following the air strikes and avoid the long delay between air and ground attacks that the British experienced at Caen.[12]

Three hundred and fifty fighter bombers from the IX TAC Air Force were to commence their attack into the narrow strip across the St Lo - Perriers road at H-hour minus 80 minutes. Twenty minutes later, 1,800 heavy bombers from the VIII Bomber Command would hit the area farther south in a one hour strike. Immediately following the heavies, another 350 fighter bombers were to hit the narrow strip again as ground troops moved up to their line of departure. Ten minutes later, 396 IX Bomber Command mediums would strike the southern half of the target area for forty five minutes. VIII Fighter Command would fly cover for the bombers.[13]

VII Corps artillery was reinforced with additional units from First Army. Nine heavy battalions, five medium battalions, and seven light battalions would assist in the preparatory fires. Gen Collins had over 1,000 guns at his disposal. Non-divisional guns under corps control fired counterbattery missions.[14]

Initially planned to follow Operation GOODWOOD (18 July) by three days, COBRA was delayed by weather and began 25 July. Anticipating a break in the weather, Air Chief Marshal Leigh-Mallory launched COBRA prematurely on 24 July. When he found the skies still overcast with poor visibility that morning, the AEAF commander postponed the operation again. Six fighter bomber groups and three heavy bomber divisions of the Ninth and Eighth Air Forces had already taken off. Only three of the fighter bomber groups were able to be recalled prior to making their strikes.[15]

Visibility was so poor over the target area that no one in the first formation of 500 heavy bombers was able to drop his bombs. As the skies cleared partially, 35 planes of the second formation and 300 planes of the final formation dropped their bombs. One bombardier accidentally released his load early and those aircraft following him in his 16 plane formation followed suit hitting 2,000 yards north of the road. The resulting short rounds killed 25 and wounded 131 soldiers of the 30th Division.

Contrary to Gen Bradley's desires, the heavy bombers approached the target area from a direction perpendicular to the front. Bradley had understood that the bombers would approach on a parallel approach for safety reasons. Having forewarned the Germans that an offensive was about to begin, Bradley had little choice but to allow the bombers to come again as planned the next day.[16]

At 0938 hours, 25 July fighter bombers of the IX TAC hit exactly on target just south of the road. As the dust and smoke drifted back over the friendlies, the target area became obscured to successive formations. The bomb loads of thirty-five heavy and forty-two medium bombers fell short of the mark repeating the disastrous results of the day before. In total, 111 Americans were killed and 490 wounded as a result of short bombing.[17] Lieutenant General Lesley J. McNair, Army Ground Forces Commander, was among those killed.

The carpet bombing did not produce the total annihilation of the enemy as desired. Despite tremendous destruction to personnel, weapons, and communications equipment survivors of Generalleutnant Fritz Bayerlein's Panzer Lehr Division were able to offer resistance with dug in tanks and infantry. Ground gains on the first day of COBRA were disappointing. By the 28th of July, however, the corps of Bradley's First Army had succeeded in breaking the German defenses and had seized their objectives.

As Bradley stated to Eisenhower:

> This operation could not have been the success it has been without such close cooperation of the Air. In the first place, the bombardment which we gave them last Tuesday (25 July) was apparently highly successful even though we did suffer many casualties ourselves. The cooperation of Quesada's IX TAC Air Command has been outstanding.[18]

In describing the operation, Martin Blumenson writes:

> Despite the bomb casualties among American troops, and despite the resistance of small isolated German groups, the bombardment was later judged the best example in the European theater of carpet bombing.[19]

Operation STRANGLE - Korea

For the duration of General MacArthur's tenure as Commander in Chief, United Nations Command (CINCUNC) the primary efforts of the Far East Air Force (FEAF) were directed towards interdiction and close air support. This emphasis did not change with MacArthur's successor, General Matthew B. Ridgway.[20] Beginning in May 1951, the FEAF conducted the first of two operations known as STRANGLE.

STRANGLE I attempted to halt communist highway traffic below the 39th parallel. STRANGLE II was launched against the North Korean rail system on 18 August 1951. The FEAF efforts were designed "to produce a slow strangulation not necessarily of the enemy army as such, but rather on his power to take the offensive."[21]

Upon receiving the primary responsibility for interdicting the enemy's lines of communications, General Edward J. Timberlake, Commander Fifth Air Force, ordered the execution of Operation STRANGLE. The plan called for dividing the key north-south roads between the 39th parallel and the front lines into three sections for concentrated attacks by the Fifth Air Force, 1st Marine Air Wing, and Task Force 77. All means of interdiction were to be employed - bridge attacks, tunnel attacks, and cratering roadbeds. STRANGLE attacks were conducted simultaneously in Air Force, Marine, and Navy sectors. Five hundred pound bombs with point detonating and delayed fuzes were particularly effective on roads through low, wet ground (rice paddies). M-38 butterfly bombs (bomblets that lay inert on the ground until disturbed) were effectively used at identified choke points along the enemy's main supply routes. FEAF Bomber Command assisted the fighter bombers initially with Superfortress attacks on railroad bridges, but their efforts were soon turned against airfields, rail yards, and supply centers.[22]

Conducted in conjunction with United Nations ground attacks towards the 38th parallel, Operation STRANGLE was successful in interdicting retreating communist forces. By mid June, Eighth Army ground forces had attained their objectives and let up pressure on the enemy. STRANGLE began to yield diminishing results as the communist forces could reorganize and resupply their units. As aircraft shut down one supply route, the enemy had time to repair it or shift to alternate routes.

The flexibility of the communist logistics system prevented STRANGLE from achieving decisive results. STRANGLE attacks slowed truck transport but were never able to completely knock out roads. Civilian labor crews forced into service were able to keep a minimum number of routes open for the transport of critical items of supply.[23]

Eighth Army and Fifth Air Force intelligence staffs noted the declining effectiveness of attacks on the road network and examined the enemy's logistical system in detail looking for more lucrative interdiction targets. The war effort could not be sustained by the limited industry in North Korea so the communists were dependent on supplies brought from Manchuria and Siberia. Planners estimated that the daily supply requirements for 60 divisions would be transported on 6,000 trucks. This was an unrealistic number. The same 2,400 tons of daily supplies could be transported in 120 boxcars. The communists had always attempted to use their railroads to their maximum capacity

so this was clearly seen as the primary means of transport. additionally, gasoline for trucks had to be imported from China or Russia, but coal for the locomotives was plentiful in North Korea.[24]

Based on this evaluation of the communist logistical system, Fifth Air Force decided to target the rail network. Railway track and roadbeds were specifically targeted for several reasons. Bridge destruction had met with limited success. The enemy simply rerouted trains or transferred their loads to lines where the bridges were still intact. Repeated attacks to the same bridges also allowed the communists to emplace antiaircraft defenses. The ability to destroy rolling stock was marginally effective at best. By targeting track and roadbeds, defended areas could be avoided and repairs were difficult to make. Materials to replace damaged sections of track could only be brought in by other trains.[25]

The Navy was asked to take responsibility for some rail lines on the east coast of the peninsula and Bomber Command was asked to take out several key bridges to the north. Air Force close air support sorties were reduced to make maximum numbers of aircraft available for the interdiction missions. Detailed coordination was an Army, Navy, and Air Force effort. Fifth Air Force light bombers would destroy truck traffic used to transport material where railroads had been destroyed.

Colonel William P. McBride, Fifth Air Force director of combat operations stated that the program would so hinder the rail and road system that the enemy would not be capable of opposing the U.S. Eighth Army effectively. Furthermore, "We can force the enemy to retire from a line generally from Pyongyang through Kowon, which is a line generally 100 miles from and parallel to the Yalu River."[26] As with the road interdiction program earlier, this rail interdiction effort was called STRANGLE.

This second Operation STRANGLE began with strikes against rail lines in north western Korea. Fighter bomber wings of the Fifth Air Force were each given specified segments of rail lines to attack daily. Most strikes were conducted with 32 to 64 aircraft along with a fighter screen. Even though it took a direct hit on the narrow 56 inch wide track to cut the rails, Fifth Air Force enjoyed moderate success. One fourth of all sorties flown achieved rail cuts.[27]

FEAF Bomber Command Superfortresses struck key bridges as a secondary priority after hitting airfields in North Korea. Task Force 77's three aircraft carriers - the Bon Homme Richard, Essex, and Antietam - launched strikes against rail lines and bridges along Korea's north eastern coast.

By the middle of September many key rail lines had been severely damaged. The North Koreans were forced to tear up sections of undamaged track to make repairs elsewhere.

Night attacks on truck convoys attempting to carry the load from the damaged rail system provided additional kills.

In October and November, Operation STRANGLE destroyed railways faster than the communists could repair them. Effective countermeasures were being developed, however. MIG's shot down a number of fighter bombers and automatic weapons emplaced along the rail lines threatened the attackers. Bombing accuracy was reduced and proximity fuzed bombs to defeat the flak reduced the payloads to cut rails. Communist troops were able to lay new track to bypass damaged sections at an increased pace.

By December, laborers were able to repair a cut rail within eight hours and have the track back in operation that night. Daylight reconnaissance of the Sunchon River bridge showed two center spans destroyed. The bridge was judged to be out of service until night reconnaissance revealed that the communists were putting up removable spans to use the bridge only at night.[28]

General Ridgway notified the Joint Chiefs of Staff on 4 January 1952 that the interdiction campaign had seriously interrupted enemy supply operations, diverted thousands of troops and vast quantities of materiel to protect lines of communications, and destroyed countless vehicles, rolling stock, and supplies. Intelligence reports indicated that a planned communist ground offensive in August had been called off because of the rail interdiction effort. Despite this success, U. N. commanders doubted the continued

effectiveness of STRANGLE. To deny the enemy the opportunity to repair track, Fifth Air Force proposed a plan involving round the clock strikes at key rail locations. Operation STRANGLE would give way to Operation SATURATE on 3 March 1952.

Operation STRANGLE achieved its limited purpose. It was designed from the outset to interrupt the enemy's lines of communication and not bring all enemy combat operations to a halt as its dramatic name may have suggested. Even though STRANGLE was successful, there were some deficiencies.

This air operation involved all theater air forces yet was not centrally controlled. All aspects of the program were interrelated yet there was no one single Air Force commander responsible. Fifth Air Force planned and executed interdiction strikes but did not control the actions of the Seventh Fleet (Task Force 77) or the FEAF Bomber Command.

Planners correctly identified the need to strike North Korean railroads but overestimated their ability to destroy the North's entire rail system. Sufficient aircraft were not available and, more importantly, planners failed to accurately judge the North's ability to react. Rail repair troops were positioned at every major rail station and crews placed every four miles along the track. Crude, but effective repairs could be made in a matter of hours. The communists also began to emplace antiaircraft weapons along all rail lines. By June 1952, more than half of the

enemy's antiaircraft artillery (132 heavy guns and 708 automatic weapons) was emplaced to protect bridges and rail lines.[29]

The rail interdiction campaign enjoyed its greatest success in the fall of 1951. STRANGLE disrupted the communist logistics system to such an extent that they were unable to support an extensive ground offensive. Unfortunately by December, effective countermeasures were developed and the campaign began to produce diminishing returns in January. STRANGLE did not place enough pressure on the enemy to force them to accept a United Nations armistice. Only after a concerted effort to increase air pressure did the communists finally agree to terms a year later.

Operation LINEBACKER - Vietnam

General Vo Nguyen Giap's Easter Offensive of 1972 brought a large, conventional force of 12 divisions into South Vietnam. His initial three divisions supported by two hundred tanks and heavy artillery crossed the DMZ into South Vietnam's Military Region I on 30 March. Nine other divisions moved to staging areas in Laos and Cambodia. Three of these divisions struck Military Region III from Cambodia and surrounded An Loc on 13 April. The final three divisions moved to positions west of Kontum in preparation for assaults against the Central Highlands.[30]

In keeping with President Nixon's goal of Vietnamization, American ground strength had fallen from 139,000 in January 1972 of 69,000 in April. To halt this Northern assault, Nixon turned to air power. The President intended for the withdrawal of U.S. troops to continue as scheduled in spite of the invasion. He ordered additional aircraft to Southeast Asia. Total F-4's in theater increased from 185 on 30 March to 374 on 13 May. Between 4 April and 23 May, 124 additional B-52's arrived at Anderson Air Base, Guam. The total of 210 B-52's in theater (U-Tapao Royal Thai Air Force Base, Thailand and Anderson Air Force Base, Guam) now accounted for more than half the bombers in SAC.[31]

Naval air assets were also increased. The carriers Constellation and Kitty Hawk joined the Coral Sea and Hancock in the Gulf of Tonkin. The carriers Midway and Saratoga arrived in July giving the Navy the greatest concentration of air power it would have during the entire war.[32]

Nixon hoped to halt the enemy assault and force a political solution by taking the war to North Vietnam itself. The President authorized strikes against the North's two largest cities - Hanoi and Haiphong. As Secretary of State Kissinger stated, "If we wanted to force a diplomatic solution, we had to create an impression of implacable determination to prevail; only this would bring about either Soviet assistance in settling the war or else

Soviet acquiescence in our mounting military pressures, on which we were determined should diplomacy fail."[33]

Two goals were paramount in the President's mind. The lives of those remaining American servicemen would not be placed in jeopardy and support to the government of South Vietnam would continue. Nixon's proposal to escalate called for the bombing of all military targets in the North, the mining of ports, and fighter interdiction to close enemy overland supply routes. Operations into strike free zones that had been prohibited by President Johnson would now be permitted.[34] Admiral Thomas Moorer, Chairman of the Joint Chiefs of Staff drafted orders on 4 May that would implement Operation LINEBACKER I.

The goals of this air campaign were similar to those of ROLLING THUNDER under President Johnson. The campaign would destroy war materiel in the North, prevent the flow of enemy war materiel in South Vietnam, and interdict the flow of troops and materiel into South Vietnam, Laos, and Cambodia.[35] The JCS targeted specifically rail and road networks, bridges, rail yards, repair facilities, POL storage areas, and power plants. The Navy's mining operations worked in conjunction with the air interdiction of enemy lines of communications to impede both the arrival of materiel into North Vietnam and the flow of North Vietnam's resources to the south.

The initial strike of LINEBACKER I took place on 10 May. Thirty-two F-4's from Thailand attacked Hanoi's Paul

Doumer Bridge and Yen Vien Railroad Yard. Twenty-nine laser guided "smart" bombs were dropped on the bridge and eighty-four conventional bombs hit the rail yard. Fifty-eight additional aircraft supported the attack by providing reconnaissance, SAM suppression, and electronic countermeasures. Both targets were heavily damaged.

This first raid of the LINEBACKER operation was typical of those to follow. Many support aircraft accompanied a relatively small number of strike aircraft. Conventional bombs were used against area targets where the risk of collateral damage to civilians was small. Smart munitions were used on precision targets in heavily populated areas.[36]

Field commanders had a greater degree of flexibility in selecting targets. During ROLLING THUNDER, specific bombing targets were selected in Washington. For LINEBACKER, a master target list was approved by the JCS but commanders could attack targets from that list at times and in a manner of their choosing.[37]

On 8 August, Admiral John S. McCain Jr., Commander in Chief Pacific Command (CINCPAC), ordered an increase in strikes in the north. Three of six carriers in the Gulf of Tonkin were ordered to devote all sorties to LINEBACKER. He also directed the Air Force to conduct forty eight sorties a day in its northern areas of responsibility. As ADM McCain had no operational control of the B-52's, he requested CINCSAC to increase heavy bomber strikes over North Vietnam.

Forty-eight F-111's arrived in Thailand on 25 September that provided an all weather, limited visibility strike capability. By 13 October, F-111 strikes accounted for half of the Air Force's efforts directed at the heart of North Vietnam.[38] Interdiction was the primary thrust of this air offensive. Highest priority targets were the rail lines and truck routes providing resupply of the North from China.

Political success at the bargaining table in September and October 1972 resulted in Nixon ending Operation LINEBACKER on 23 October and halting all bombing north of the 20th parallel. Continued pressure on the North was indicative of U.S. resolve and was instrumental in forcing a political solution.

As a token of good will, the President suspended attacks above the 20th parallel but there was to be no bombing halt until the agreement was signed. He was not going to be taken in by the mere prospect of an agreement as Johnson had been in 1968.[39]

Command and control problems that occurred during ROLLING THUNDER remained uncorrected during LINEBACKER. The President named no overall air commander because of parochial interests of both the Air Force and Navy.[40] North Vietnam was divided into geographic regions called Route Packages under control of CINCPAC. Essentially separate operations were launched against the different regions with very little coordination between regions. The Navy and Air Force conducted a joint conference in July to deconflict the air space over the Gulf of Tonkin, but no attempt was made

to coordinate the effects of their strikes in the target area.

Unity of command for the air operation was lacking. General John W. Vogt Jr., Seventh Air Force Commander, reported to the Commander in Chief, Pacific Air Forces (CINCPACAF) and CINCPAC. He received additional guidance from both the Chief of Staff of the Air Force and Chairman, JCS. He had no direct control of the heavy bombers, so any employment of B-52's had to be requested through CINCPAC to CINCSAC.

Despite these problems LINEBACKER was considered a success. More than 155,500 tons of bombs were dropped on North Vietnam from April through October 1972. The Northeast and Northwest Railroads averaged fifteen wrecked bridges each during the operation. Interdiction reduced overland imports from 160,000 tons to 30 tons a month. Mining of the North's harbors reduced imports by sea from 250,000 tons a month to almost zero. For three weeks following the mining of Northern ports, China refused to ship any material to North Vietnam. China refused to allow the transport of Soviet goods across their borders to North Vietnam for three months.[41]

The success of LINEBACKER I can be attributed to the nature of the communist offensive. The conventional nature of Giap's offensive resulted in the dependence on a strong logistical system. Large quantities of ammunition and POL were necessary to support the tanks and cannons employed by

Giap. The storage and transport of these supplies were vulnerable to air attacks and presented lucrative targets. As the British military authority Sir Robert Thompson commented, "You cannot refuel T-54 tanks with gasoline out of water bottles carried on bicycles."[42]

By the end of LINEBACKER I, all fixed oil storage facilities had been damaged or destroyed. Seventy percent of the North's electric power generating capacity had been knocked out. In Hanoi, electricity was being provided only to military facilities by portable generators. Twenty to forty percent of the city's population had been evacuated.[43]

The success of LINEBACKER was also contingent upon success on the ground in the South. As Nixon himself said in May 1972, "All the air power in the world and strikes on Hanoi and Haiphong aren't going to save South Vietnam if the South Vietnamese aren't able to hold on the ground."[44] Close air support strengthened defenses in the south and Giap's offensive was blunted by June.

A key reason for the success of LINEBACKER was its link to the President's political objectives. Johnson had hoped to use air power in ROLLING THUNDER as a means to establish an "independent, stable, noncommunist South Vietnam."[45] This was a far reaching objective for limited means. Nixon, however, used air power to achieve a more limited objective. Nixon wanted only to insure the continued withdrawal of American forces and prevent the immediate collapse of the South. Air power in the face of Giap's conventional assault

could buy time necessary for South Vietnam to build strength. This goal was achievable especially when used in conjunction with Nixon's and Kissinger's diplomatic efforts.

LINEBACKER I was instrumental in gaining concessions from the North but did not bring the war to an end. By August, Giap had committed 14 divisions and 26 independent regiments in a failed atempt to accomplish his goal.[46] LINEBACKER I had destroyed the enemy's means to resist. North Vietnamese unwillingness to come to a final peace agreement would prompt the President to attack his will to resist. The stage was set for LINEBACKER II.

The "Eleven Day War" as LINEBACKER II has been called was an intensive bombing campaign that lasted from 18 to 29 December 1972. This was more than the interdiction campaign of LINEBACKER I. This was a strategic campaign designed to send a clear message to North Vietnam. Bombing continued regardless of weather for eleven straight days. Thirteen percent of the tonnage delivered in the five months of LINEBACKER I fell on the North in the short, intensive LINEBACKER II.[47]

LINEBACKER II may better serve the student of strategy than the student of operational art. It was less directly linked to the conduct of ground operations than was LINEBACKER I. It's influence on the overall war effort cannot be denied because a final peace accord was signed less than one month after the completion of LINEBACKER II.

IV. ANALYSIS

FM 100-6 lists several critical elements of operational fires. Such fires are self-contained operations designed to achieve a single operational objective. They are planned and synchronized at an operational headquarters. Finally, the failure to achieve the desired results would put the attainment of the operational commander's objective in jeopardy.[48] The case studies presented reveal these critical aspects plus several others. Lessons concerning the effects of fires with operational maneuver, joint aspects of fires, and the command and control of operational fires can also be seen.

The carpet bombing in Normandy was intended to create a gap in German defenses west of St Lo through which forces of Gen Collins' VII Corps could rapidly pass. In spite of problems in timing, target visibility, and friendly casualties, the bombing achieved its purpose. As Martin Blumenson described, the Germans were completely surprised by the massive bombardment, their signal facilities were wrecked, and all attempts to reestablish order were marked by ignorance and frustration. German soldiers were deaf for 24 hours and scattered enemy defenses were quickly overwhelmed by Collins' ground attack.[49] Planning for the carpet bombing was done by Air Chief Marshal Leigh-Mallory's AEAF to be executed by the Eighth and Ninth Tactical Air Forces. The degree to which the carpet bombing was successful could be debated, but it cannot be denied that

its execution enabled the breakout of VII Corps forces by rupturing German defenses.

The success of operational fires cannot be measured solely in terms of tonnage of ordnance delivered or quantity of enemy materiel destroyed. As FM 100-6 points out:

> The value of the employment of an asset is measured in the overall context of the operation and not within the strict confines of the capability itself.[30]

Operational fires are a success only to the degree to which they contribute to the attainment of the operational commander's goal. The carpet bombing at Normandy provided for operational maneuver in COBRA.

Operational fires are a joint effort. Field Artillery fires from VII Corps and First Army units were integrated into the Air Force carpet bombing plan to support the breakout. Target locations were selected based on the capabilities of the individual weapons systems.

The single operational objective for STRANGLE was to impede the road and rail movement for communist forces south of the 39th parallel. The interdiction effort was not intended to bring all enemy combat action to a standstill, which was clearly beyond the capability of an air operation alone.

STRANGLE was successful in interdicting communist lines of communication to such a degree that they were unable to launch an extensive ground offensive. Had the interdiction effort been a failure, the CINCUNC operational

objectives would have been jeopardized. This was not the case as STRANGLE was successful in achieving its limited objective.

The success of the interdiction operation was directly linked to the operational maneuver of the ground forces. This can be seen by the diminishing success of STRANGLE in mid June as Eighth Army ground forces let up pressure on the retreating communists. As ground pressure eased, communist forces were able to resume normal operations. STRANGLE enjoyed its greatest success when the air operation was conducted in conjunction with relentless ground pressure denying the enemy an opportunity to effectively resist.

LINEBACKER was designed to halt the massive conventional assault of the NVA in the spring of 1972. LINEBACKER's objective was to buy time for the withdrawal of U.S. forces as the government of South Vietnam took an increased responsibility for its own defense. The attainment of strategic goals in theater would not have been possible without these successful interdiction efforts. LINEBACKER I effectively destroyed the enemy's means to resist. LINEBACKER II effectively destroyed his will and played a key role in bringing about a final peace agreement.

The success of LINEBACKER I was tied to success of forces on the ground. The goal of buying time for the removal of U.S. troops was contingent upon the successful Vietnamization program. More importantly, the success of LINEBACKER I can be tied to the conventional nature of

Giap's offensive. Just as in STRANGLE, the enemy's dependence on lines of communications to conduct intensive combat operations caused those LOC's to become lucrative targets. The joint aspect of operational fires can be seen in both STRANGLE and LINEBACKER I by the use of Air Force, Navy, and Marine air assets.

The lesson taken from these case studies with the greatest potential implication for future operations deals with the issue of command and control of operational fires. Problems with command and control resulted in the tragic death of friendly forces in Normandy and led to an inefficient use of air assets in both Korea and Vietnam.

One cannot condone the error in planning that resulted in the needless death of American soldiers in COBRA. It is unforgivable that a misunderstanding in the direction of attack by the heavy bombers could have such tragic consequences. Bradley assumed that the bombers would approach from a parallel direction. Bomber Command compromised on minimum safety distances to allow for all planes to pass over the target area in desired formation and understood that they had approval to over fly friendly positions. This is hardly a minor detail. The planning session should not have concluded prior to this issue being resolved. The early departure from the meeting by both Bradley and Leigh-Mallory was no excuse for poor coordination.

The second major error in COBRA was the inability to recall the bombers after Leigh-Mallory decided to abort the mission. The reliance on ground visual signals alone was an unsatisfactory control measure. Poor visibility due to weather and obscuration of the target area from fighter bomber attacks could have been anticipated. Effective coordination between the ground and air component commanders was clearly lacking.

Operation STRANGLE involved all theater air assets but was not centrally controlled by one commander. Fifth Air Force planned all interdiction strikes but did not control the planes from Seventh Fleet or the FEAF Bomber Command. The designation of an Air Component Commander with the authority to task all air assets regardless of service would have provided more effective control of air operations. Failure to work in harmony may have allowed interservice rivalries to develop. The following statement by Gen Jacob Smart (Far East Air Force Deputy Chief of Staff for Operations) is indicative of a lack of cooperation in executing a single joint campaign with air, land, and sea major operations properly integrated.

> The opinion so often expressed or implied is that the Eighth Army is responsible for winning the Korean War, and that the role of the other services is to support it in its effort.[31]

No service was capable of winning the war singlehandedly.

Identical problems in command and control that occurred in STRANGLE reappeared in Vietnam. No overall air commander

was designated for LINEBACKER. Each service was given a geographic region of North Vietnam and essentially conducted independent operations in each area. The Seventh Air Force commander reported to both the CINCPACAF and CINCPAC, received guidance from the Chief of Staff Air Force and Chairman JCS, and had to request B-52 strikes from CINCSAC. Unity of command was again lacking. Control of air operations would have been enhanced if centralized authority was given to a single individual such as Commander, Seventh Air Force.

V. CONCLUSIONS

I have attempted to accomplish three tasks in this paper. First, I have provided a definition of operational fires to distinguish them from fire support at the tactical level. Second, historical examples have been cited to illustrate the concept. Finally, an analysis to examine the measure of success achieved by these operations was presented.

Operational fires are not simply tactical fires at a greater range or on a grander scale. Operational fires are distinctly different. Though they accomplish many of the same functions as their tactical counterpart, operational fires are distinguishable by their purpose and method of planning. Where fire support thrives in the domain of the close battle, operational fires more appropriately fit with the deep battle. Interdiction strikes against uncommitted

forces deep in the enemy's rear by many delivery means - air, ground/sea launched systems, SOF action - characterize operational fires. Like operational art itself, operational fires are less concerned with the current battle and attempt to set the conditions for future battle.

The carpet bombing that preceded the Allied breakout from Normandy (COBRA), the interdiction operation in Korea (STRANGLE), and the interdiction operation in Vietnam in 1972 (LINEBACKER) are examples of operational fires. Fundamental tasks performed by operational fires are to facilitate operational maneuver, isolate the battlefield, and destroy operational facilities. Though primarily accomplished by air power, the greatest success was achieved when these operations were conducted in conjunction with ground operations. The measure of success was the degree to which these operations contributed to the attainment of the operational commander's objective.

The effective command and control of operational fires has the greatest implication for future operations. The lack of an effective C^2 mechanism resulted in fratricide, difficulty in coordinating activity, and an inefficient use of assets. Joint doctrine that is now being written will provide for more effective control of operational fires to correct some of those problems. As more weapons systems are fielded that have the capability to reach operational depths, the issue of command and control will become more critical. Unity of command will be key.

VI. IMPLICATIONS

Colonel William Mendel and Lieutenant Colonel Floyd Banks, Jr. outline seven tenets of a campaign plan in their study entitled Campaign Planning produced at the Strategic Studies Institute, U.S. Army War College. According to Mendel and Banks a campaign plan:[82]

1) Provides broad concepts of operations and sustainment to achieve strategic military objectives in a theater of war and theater of operations; the basis for all other planning.

2) Provides an orderly schedule of strategic military decisions; displays the commander's vision and intent.

3) Orients on the enemy's center of gravity.

4) Phases a series of related major operations.

5) Composes subordinate forces and designates command relationships.

6) Provides operational direction and tasks to subordinates.

7) Synchronizes air, land, and sea efforts into a cohesive and synergistic whole; joint in nature.

The last tenet listed has the most direct application to operational fires. Operational fire assets come from air, land, and sea components.

The theater of war campaign plan is supported by a theater of operations or joint task force campaign plan. These supporting plans are in turn supported by air, land, and sea major operations plans.[83] While it makes sense that these major operations plans are written by the component

commanders respectively, the danger still exists that a single, integrated plan will not be produced unless one commander is put in charge.

A fire support coordinator (FSCOORD) exists at lower tactical levels. The fire support elements at Army and Army Group level are principally concerned with nuclear and chemical fire planning. With separate service component plans being developed, it is imperative that the operational commander tie these plans together. He must designate one individual to perform the function of the FSCOORD - call him an operational fires coordinator (OFCOORD) - to ensure effective use of multiservice assets. If service parochial interests preclude one of the major component commanders from performing this function, then the theater or operational commander must do so with his own staff.

JCS Pub 3-0, Doctrine For Joint Operations, discusses collateral joint activities and states that:

> these activities may not require that they be controlled by a joint force commander, they should at least by jointly coordinated.[54]

JCS Pub 3-03, Doctrine For Joint Interdiction Operations, goes one step further. It specifies that:

> the Joint Force Commander (JFC) will designate a single subordinate commander for the interdiction campaign whose responsibilities are assigned by the JFC.[55]

JCS Pub 3-03 goes on to say that:

> the JFC normally will task the Joint Force Air Component Commander (JFACC) with responsibility for the interdiction campaign.[56]

Unity of effort is enhanced with the designation of a single responsible commander. In this way, one individual can synchronize the actions of air, land, sea, and special forces to avoid duplication and ensure maximum effective effort in interdiction operations. Piecemeal employment of diverse assets fails to achieve the synergistic effect most advantageous to the operational commander.

Operational fires have historically been provided by air assets. Even today our joint doctrine recognizes the primacy of the Air Force in the interdiction role. The JFACC is normally given responsibility for interdiction rather than the GCC. As modern systems are fielded, specifically long range missiles, the ability to deliver operational fires will no longer rest solely with the Air Force. The critical element is not which service component commander controls the fires, but rather that a single commander is in fact given sole responsibility.

Unity of command is essential for the proper application of combat power. FM 100-5 describes unity of command as directing and coordinating the actions of all forces. While this can be achieved through cooperation, it is best achieved "by vesting a single commander with the requisite authority to direct and to coordinate all forces employed in pursuit of a common goal."[57] The employment of operational fires is no exception. By insuring unity of command, the difficulties encountered in COBRA, STRANGLE, and LINEBACKER can be overcome.

ENDNOTES

1. U. S. Army, Field Manual 100-6, Large Unit Operations (Coordinating Draft), 30 September 1987, p. vi.

2. Ibid., p.vii.

3. Ibid., p. 3-7.

4. U. S. Army, Field Manual 100-5, Operations, (May 1986), P. 10.

5. FM 100-6, Large Unit Operations (Coordinating Draft), p. 3-13.

6. Ibid., p. 3-17.

7. Ibid., p. 3-13.

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10. Russell F. Weigley, Eisenhower's Lieutenants, (Bloomington IN, 1981), p. 137.

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12. Ibid.

13. Ibid., p. 151.

14. Ibid.

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16. Martin Blumenson, The Dual For France, (Boston, 1963), p. 89.

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23. Max Hastings, The Korean War, (New York, 1987), p. 267.

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25. Ibid.

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29. Ibid., p. 473.

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40. Ibid., p. 145.

41. Ibid., p. 167.

42. Ibid.

43. Ibid.

44. Lewey, America in Vietnam, p. 198.

45. Clodfelter, The Limits of Air Power, p. 173.

46. Ibid., p. 174.

47. Ibid., p. 196.

48. FM 100-6, Large Unit Operations (Coordinating Draft), p. 3-15.

49. Blumenson, The Dual for France, p. 94.

50. FM 100-6, Large Unit Operations (Coordinating Draft), p. 3-7.

51. Hastings, The Korean War, p. 266.

52. William W. Mendel and Floyd T. Banks, Jr., Campaign Planning, (U. S. Army War College, 1988), p. 8.

53. Ibid., p. 102.

54. JCS PUB 3-0, Doctrine for Joint Operations (Final Draft), (April 1989), p. III-9.

55. JCS PUB 3-03, Doctrine for Joint Interdiction Operations (Initial Draft), (June 1989), p. IV-2.

56. Ibid., p. IV-3.

57. FM 100-5, Operations, p. 176.

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